



# Climbing the ladder: skills for sustainable recovery

July 2014

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## Introduction

Over the past year, it's becoming increasingly clear that the UK economy is at long last moving on from recession to stronger growth, which is really good news. Employment is rising as economic output picks up and business confidence strengthens. However, our analysis within the UKCES highlights the persistence of some deep-rooted structural skills and employment challenges in the UK economy. We must not lose sight of these and they have to be tackled if we are to create the conditions for a prolonged, balanced, structural recovery.

These challenges relate to how effectively businesses make use of and develop their people to drive improvements in their performance. Their persistence is hampering productivity and the achievement of wider benefits. Indeed, since the recession the UK has seen a large gap develop in its productivity compared to other leading economies. It is through the skills and capability of the workforce that businesses can turn this around.

In taking the ladder of opportunity as a metaphor we have identified skills challenges across three 'rungs' – the bottom, middle and top. This paper sets out some of the headline challenges from our initial investigations which we think require action if we are going to effectively drive long term growth. We are publishing the results from our work to date to draw attention to the challenges and stimulate a debate over the summer about how they can best be tackled. In the autumn we intend to publish a comprehensive analysis on what needs to be done, highlighting specific actions by employers, employees and government. We now turn to the three rungs, each requiring urgent attention.

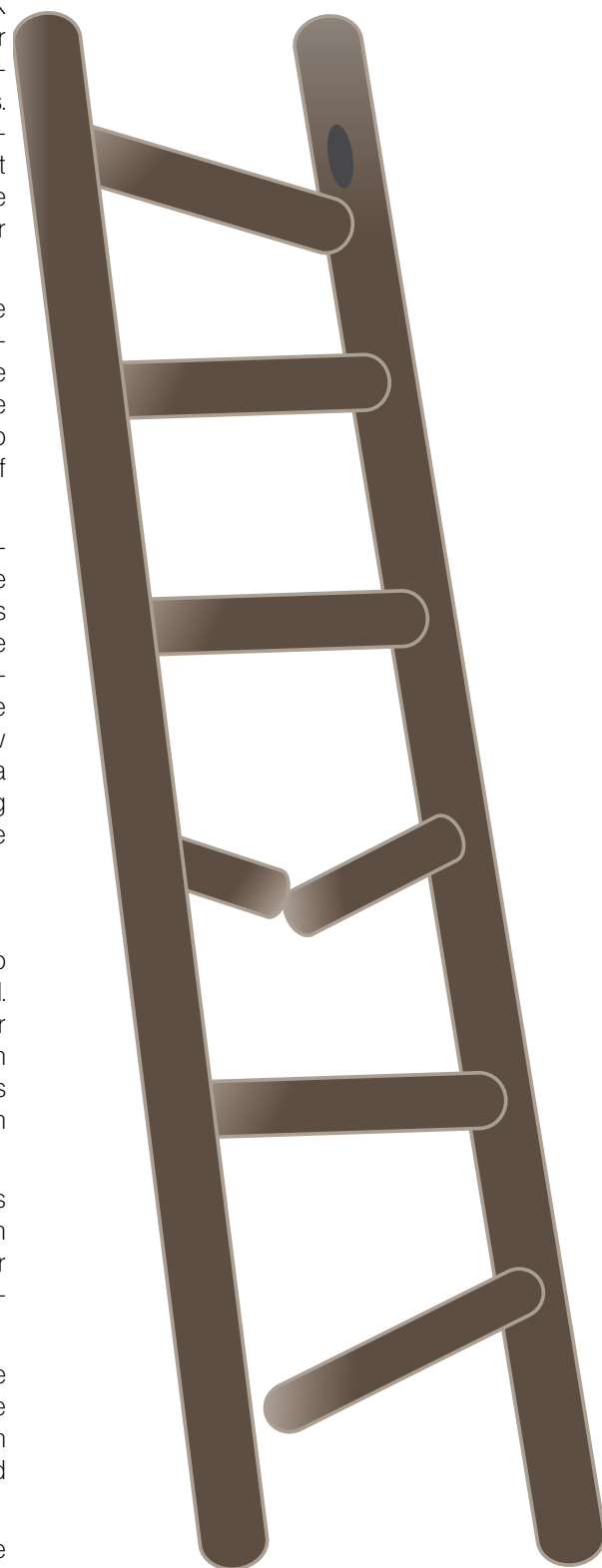
### Getting in: bottom rung

At the bottom rung the risk is that the prospects of getting into work, beyond precarious, short term opportunities are not equal. There are particular risks for young people starting out on their careers. Whilst youth employment has improved recently, in line with a growth in overall employment levels, this conceals a longer term trend. The level of young people out of work is in stark contrast to unemployment more generally.

In fact, the UK stands out among European economies for its combination of relatively low unemployment with relatively high youth unemployment. But why? Clearly, education is a factor and many of those who are out of employment have no qualifications.

But this is not the only reason. Part of the answer is also because the decline in youth employment actually started over a decade ago. It reflects continuing, pro-longed structural developments in the labour market as entry jobs in traditional industries decline and with them valuable opportunities to combine work and study.

Work experience is vital. Many of those countries that provide



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higher levels of earning whilst learning see lower levels of youth unemployment. In the UK too, those young people with four or more work experience activities during their education are five times less likely to not secure education or employment later on. But over the last decade the proportion of 16-24 year olds combining employment and education has fallen.

*How do we better connect education and the workplace with more businesses offering quality work experience integrated into study programmes and supporting new entrants through robust career pathways in work?*

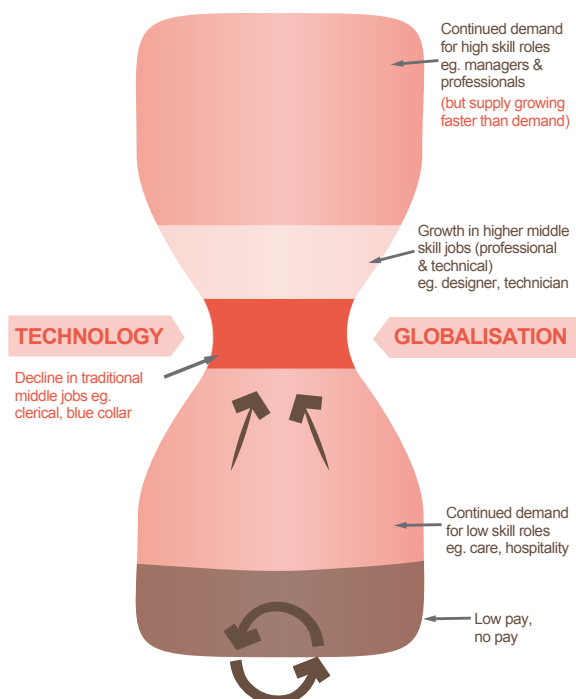
### Getting on: middle rung

For those in work, particularly in low paid and low skilled jobs, is the challenge of how employees progress through the middle rungs on the ladder. As with youth employment, the trends reflect long term developments in the structure of the economy, which are challenging traditional notions of a job for life and fixed career plans. With the ongoing shift from relatively highly paid employment in manufacturing towards lower paid service jobs, the risk is that this is not an economy rebalancing to compete globally on the basis of high valued added activities and therefore the talents and capabilities of its workforce. With the recession accentuating historical trends, and the recovery, focusing on the top and bottom of the labour market, middle-level jobs have not recovered their losses. A growth in more flexible forms of employment on fixed and casual contracts has enhanced uncertainties for growing sections of the economy.

Increasingly, with these changes in sector composition, there are signs that we may be seeing the consolidation of an hourglass labour market (see Figure 1), driven by the twin effects of technology and globalisation. This is creating winners and losers. The expansion of the digital economy, and growing applications for information and communications technology, has extended the opportunities for the highly skilled to perform at ever more complex levels, whilst middle skilled jobs see their more routine work automated. In an increasingly competitive global economy, the UK will come under growing pressure to relocate business operations where it is more cost effective to do so and out-source through global supply chains, which equally affects middle rung jobs.

As businesses evolve in pursuit of comparative advantage in this competitive world, there will be greater prospects for analysts, designers and technicians working within global value chains. Traditionally considered high-skill, these are becoming the new middle-ranking jobs. Over the past decade, and we project for the decade ahead, it is high-skill, knowledge intensive areas that enhance the innovative capacity of businesses, and which drive progress and growth, and that's an important part of achieving

**Figure 1**  
Technology, globalisation, and  
the hourglass economy



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a lasting and sustainable recovery. Those individuals and employers who cannot embrace and adapt to change risk being left behind.

*How do we work with business to create more quality jobs backed with robust vocational pathways?*

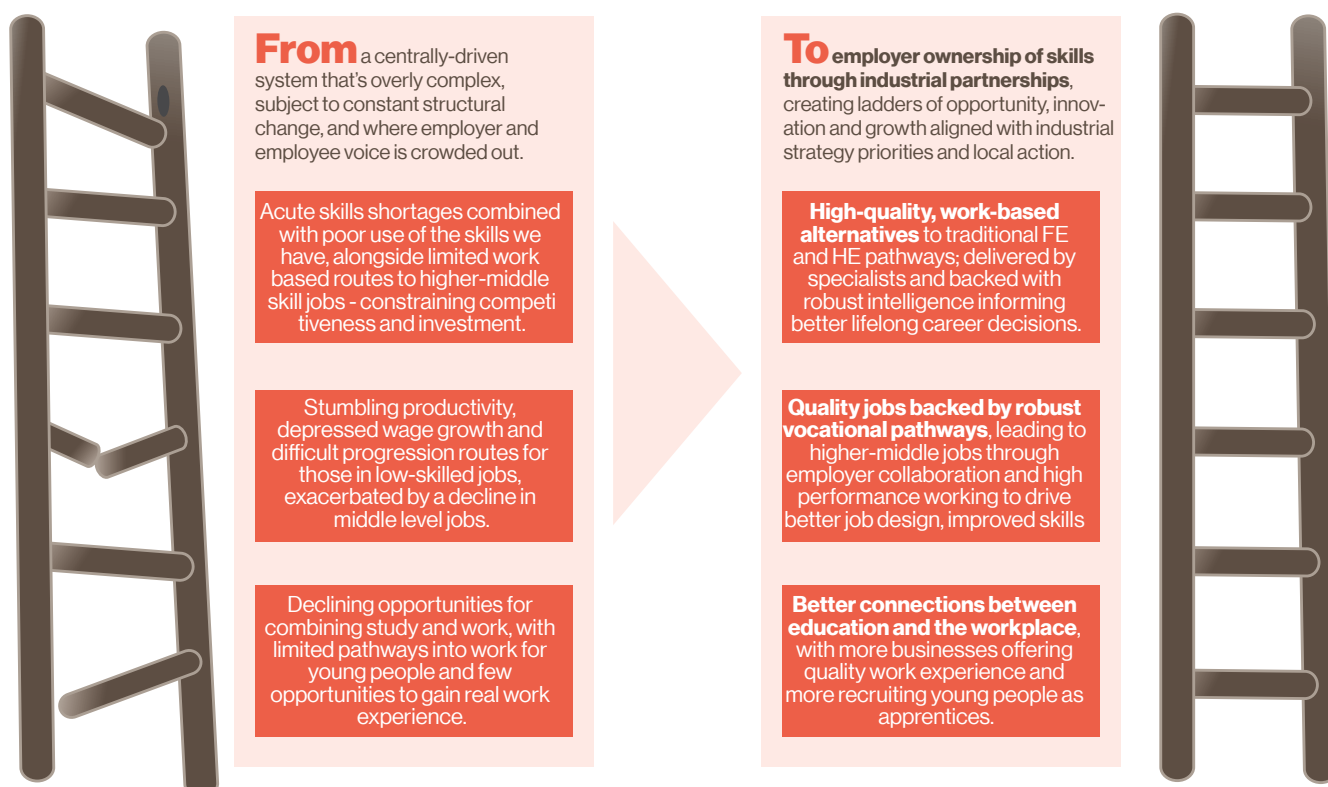
## Moving up: top rung

At the top rung of the ladder, our prosperity depends on rising productivity and continual improvements so we need to make the best use of our most highly skilled talent to innovate and drive progress. But whilst many great businesses need more skills, our current skills system develops high skills only to see them increasingly underemployed in the wrong places. So, at the same time, our employer skills survey shows that as businesses report persistent skills shortages amongst higher skilled jobs, they also report that people's skills are under-utilised. The risk is this significantly impacts on the ability of those sectors, critical to future growth, to compete effectively in the global economy.

Part of the problem is that when employers want to train to grow the skills they need, they find themselves frustrated by cost and time pressures. But they also struggle to find the skills they need. So, it is also true that we are not exploiting the potential of the work based routes to higher skilled jobs as compared to other

**Figure 2**

Finding our way to a better ladder of opportunity



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countries, targeted to the new emerging jobs. These form essential pathways to develop technical and professional skills in a workplace setting that are therefore directly relevant to work. Instead, the UK has created a greater supply of higher skills through graduates, and the expansion of higher education, and alternative vocational routes combining study and work are under-utilised.

Our business intelligence also shows that employers recognise they are not meeting all their *future* upskilling requirements either (indeed, two fifths of employers want to do more training and nearly three quarters have further upskilling needs they need to meet in higher skilled roles in the coming years). Further, whilst we have world class businesses which are high performance working, we do not have enough of them. These factors, combined with the growing level of skills under-utilisation, raise questions about current management practices and whether businesses are doing enough to raise global competitiveness.

*How do we work with businesses to strengthen high quality work based alternatives to traditional FE and HE routes, which combine work and study?*

### Looking ahead

Autumn gives us some months to work hard on clarifying the challenges and developing solutions about how they might best be tackled. With the rungs of the ladder in mind, we can begin to think about the particular actions we want to propose, at each rung. Reflecting on solutions across the whole ladder means our proposals will be system-wide. We still believe the action of businesses will be very important in driving improvements across the system and therefore will be building on our existing proposals to strengthen collective employer leadership which we call *employer ownership of skills*. Our current analysis helps us shape where we are and in developing solutions we can set out where we are going to.

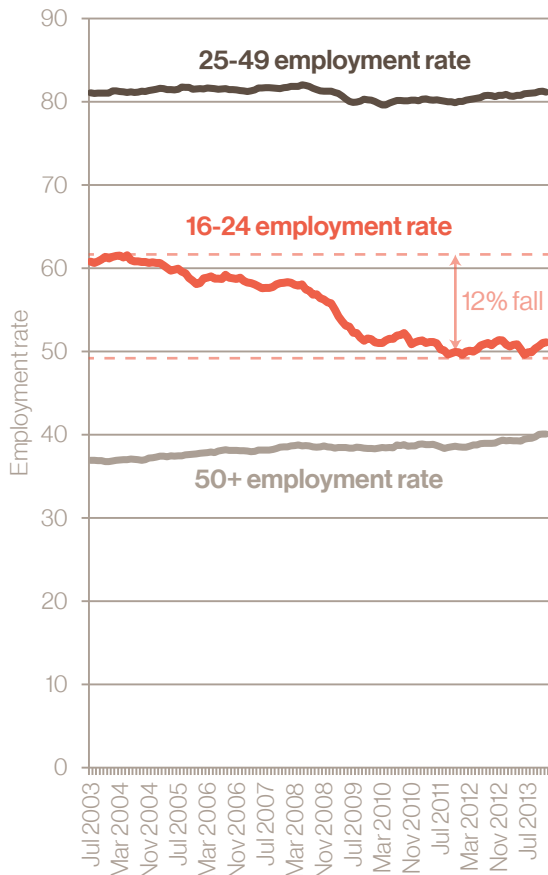


# Getting in

The recession accelerated difficulties for people looking for work and a decade-long trend of falling youth employment. Education continues to be vital, and supports employment growth, but there still are declining opportunities for study and work which enhance long term prospects. Employers gaining more business need to ensure more and better opportunities to support new entrants and their progression.

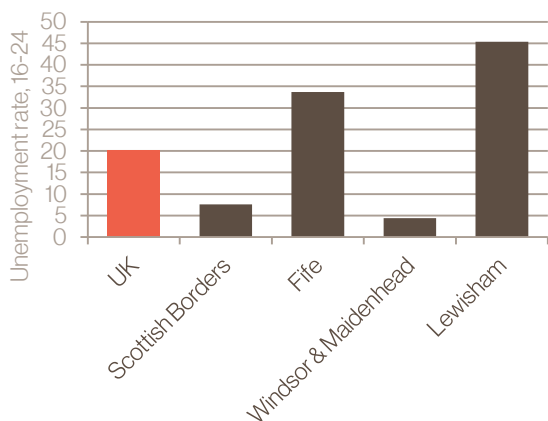
## Youth jobs are growing, but not enough to recover a decade-long decline.

**Chart 1**  
Employment by age group, 2003-2013



Source: ONS Annual Population Survey, NOMIS.

**Chart 2**  
Youth unemployment in 4 local authorities



Source: ONS Annual Population Survey, NOMIS.

The UK economy is now in recovery, six years after the onset of the recession in 2008. In difficult times, the labour market performed relatively well at keeping people in work: the rise in unemployment was smaller than could have been expected. But it still hit hard on those at the margin of the labour market who find it hard to secure work: those with limited skills, and young people. To ensure the recovery can be sustained, it is important we overcome the challenges faced by those having the most difficulty finding work. Employment is a vital to securing independence and having more people working productively will drive the lasting social prosperity we seek.

Young people particularly continue to face a challenging labour market post-recession which hampers their transition into work. Back in 2003-4, youth employment was over 60 per cent, but this had fallen even before recession, in an expanding economy. With recession, youth employment dipped below 50 per cent of the 16-24 age group; and despite signs of economic recovery, it is only now a little above this level.

To get back to the employment rate of young people seen a decade ago, more than 400,000 16 to 24 year olds would need to enter work (Chart 1). While youth employment is improving, there seems little immediate prospect of returning to the rates of a decade ago. The contrast with other age groups is instructive: the 25-49 employment rate has mostly recovered from the few percentage points lost during recession, while the over-50 employment rate is higher now than ever.

Where they are employed, young people are disproportionately likely to be effected by the increased use of casual, short-term arrangements or those with 'zero hours' guaranteed. Workers on flexible contracts are less likely to receive training than those on 'standard' contracts (40% vs. 49%) and are more likely to pay for their own training. This could potentially hamper opportunities to progress to more highly skilled roles, especially important at the start of a career.

Just as the overall unemployment rate can ignore the particular experience of young people, the national picture can obscure wide variations. Levels of youth unemployment vary greatly by place, suggesting that many of the structural causes concentrate in some local labour markets, hindering their efficiency at getting young people into work.

Nor are these variations a simple 'North/South divide' - in any region there are areas with high and low youth unemployment (Chart 2). Alongside place, there are other sources of variation: for example, young black people have more than double the overall youth unemployment rate, which poses concerning questions about equal access to employment opportunity at the start of a career.

## We have comparatively low unemployment – except for young people.

In international comparison, the UK fares reasonably well on unemployment through the recession, sustaining rates similar to those of the 'north European' economies. As the economy has picked up to rapid growth, the unemployment rate has at the time of writing fallen well below seven per cent.

But as we highlight in our new report *Precarious futures?*, our overall unemployment performance is not reflected in levels of youth unemployment. In fact, comparing our strong unemployment performance with 'prime age' workers (25-49 years old) with our performance for young workers (15-24) highlights that the UK's problems with youth unemployment are particularly acute. As Chart 3 shows, the ratio between the two unemployment rates – a measure of the labour market's relative inefficiency in absorbing young people – puts the UK at the top.

In every European country, unemployment is higher for young people than for adults, but in the UK it is more than three times higher, and this reflects a longstanding difference. Even countries suffering greatly in the Eurozone crisis, such as Spain and Greece, have a lower ratio of youth to adult unemployment than the UK. While those countries may suffer greater overall unemployment, it is relatively less concentrated among young people.

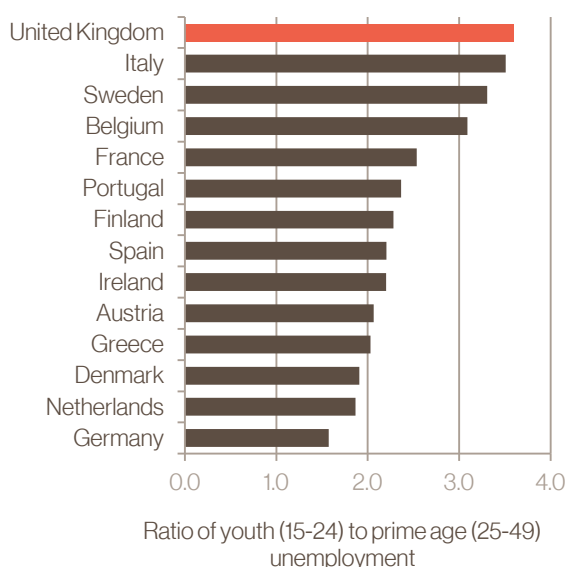
Part of the explanation may be that jobs growth in the UK following recession has been greatest in sectors and occupations that require higher level skills or that do not traditionally employ young people. Young people are largely dependent on sales and customer service occupations and elementary occupations for employment, with half of all young people employed in such occupations (compared to just 15 per cent of those aged 25 or over). Following recession, young people are competing for these jobs with older and more experienced workers.

That may be true, but it doesn't account so well for the lasting nature of the change, tracing back over a decade. Still, other common explanations have their weaknesses too. Discussion of education being 'over-expanded' misses the fact that education remains one of the best ways of protecting against unemployment: at age 24, more than 12 per cent of those with their highest qualification at GCSE level were unemployed, compared to 8 per cent of those with a degree (Chart 4).

Substantial shares of those who are long-term unemployed or economically inactive have no qualifications (this is at least partly because of the age profile of those groups, with relatively large shares of older people). But education on its own is not a panacea: young people need practical work experience to help demonstrate their skills to employers. It is how best to combine education and work that matters.

**Chart 3**

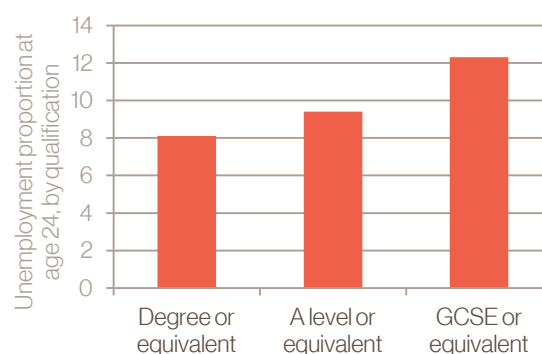
Ratio of youth to prime age unemployment, selected EU member states



Source: ONS, *Young people and the labour market*, 2014.

**Chart 4**

Unemployment proportion at age 24, by highest qualification attained



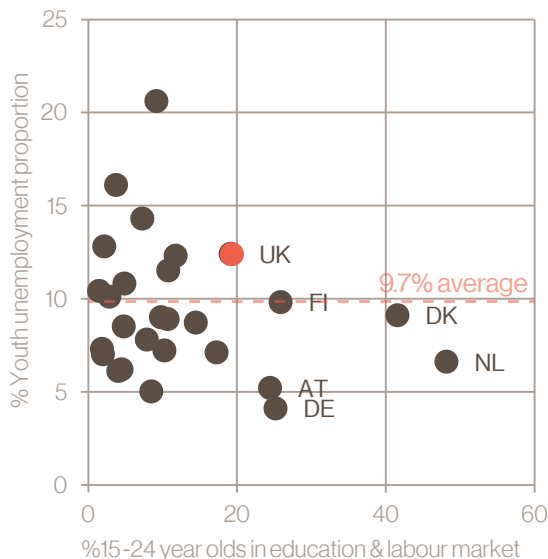
Source: ONS, *Young people and the labour market*, 2014.



## Work experience is essential, but has drifted away from education.

**Chart 5**

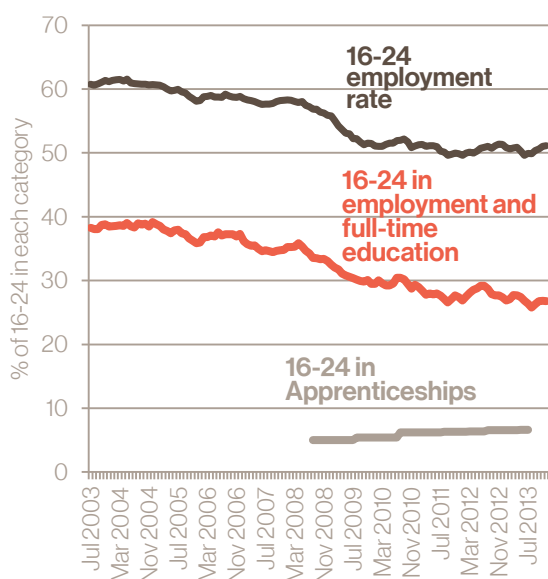
15-24 year olds: proportion unemployed and in education & the labour market across the EU



Source: ONS, *Young people and the labour market*, 2014.

**Chart 6**

UK employment, combined work and study, and Apprenticeship participation, 16-24 year olds



Source: ONS, *Young people and the labour market*, 2014.

The benefits of work experience to young people are well documented. Young people with four or more work experience-type activities during their education are five times less likely to be not in education, employment or training later on. Graduates with work experience get better degrees, higher wages and are less likely to be unemployed.

Young people can gain experience of the workplace through work experience placements, sandwich placements or internships; or through combining paid work with study (so-called 'earning while learning'). This could be through a formal apprenticeship, or by taking up a part-time job during school, college or university. The UKCES publication *Not just making tea... reinventing work experience* highlights good practice around work experience from employers, colleges and trainers.

As Chart 5 shows, many of those countries which achieve higher levels of earning while learning – highlighted are Finland, Denmark, Austria, Germany and the Netherlands – achieve lower levels of youth unemployment. That said, there are other countries that achieve lower levels of youth unemployment with less combined work and study: which is the relevant example for the UK.

Historically, the UK used to be among those countries with higher levels of combined work and study; its decline coincides with the fall in employment over the 2000s (Chart 6). Over the past decade, the proportion of 16-24 year olds in employment and full-time education has fallen similarly with the employment rate. That long term shift is unique to the UK; other EU member states have seen relatively stable levels of earning while learning, or a dip only since recession.

It's tempting to think that apprenticeships are the answer here, but that's too simplistic. True, countries with extensive apprenticeship systems including Germany, Austria and Switzerland all see much higher rates of earning while learning, while also achieving lower levels of youth unemployment. However, so too do countries with less extensive apprenticeship systems, such as the Netherlands, Australia and Canada. Also, apprenticeship volumes would have to expand dramatically to make up the gap (Chart 6).

It remains unclear why earning while learning has fallen from favour. Part-time work has grown significantly in recent years, although less so in entry-level occupations more accessible to young people. It may also be that the part-time work available sits less easily with the requirements of full-time study than may seem from afar. In any case, there is a need to understand the reasons why and consider again how our education and training institutions, and our recruitment practices can help to restore the past, strong association between work and study.



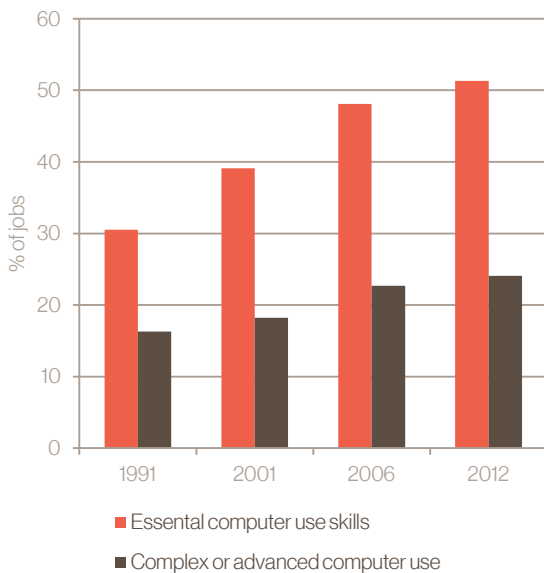
# Getting on

Changes in the world of work through accelerating technology, globalisation and longer working lives are changing career paths.

For those in work there is the challenge of how to progress. We're better educated, meeting a rising demand for skills. But better businesses need to develop new middle skill career pathways as old ones decline to prevent an hourglass economy.

## New technology & longer lives mean we need adaptable career plans.

**Chart 7**  
Proportion of jobs requiring essential or complex or advanced computer skills, 1991-2012



Source: Skills and Employment Survey, ESRC/UKCES.

The world economy is changing radically, with dramatic effects for how we work, individual jobs and skills and any traditional notions of a 'job for life'. As with youth employment, these trends reflect long term structural shifts. For those already in work, especially in less skilled jobs, who have difficulty adapting, this presents particular challenges about retaining work and how to get on. As traditional middle-level jobs decline and new skills develop, there is a risk of increasing the divide between those who can adapt to change and those who can't. We need to act to prevent too many people being left behind.

**New technology is transforming workplaces.** For decades now, computer power has been increasing exponentially, with cost falling just as fast. The iPad 2, launched for under \$1,000 in 2011, offers the same peak computing power as the Cray 2 super-computer launched in 1985 with a \$35m in today's prices. Internet traffic has grown twelvefold between 2006 and 2011.

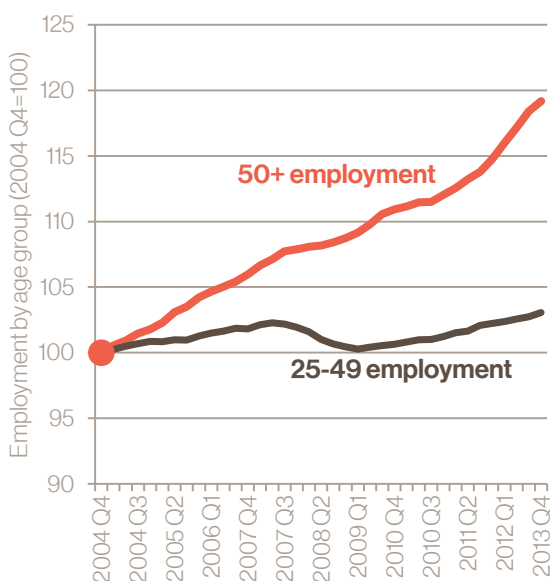
British workplaces are no exception. Chart 7, from the Skills and Employment Survey, shows that in 1991, fewer than one in three jobs required 'essential' and one in six 'complex or advanced' computer skills. By 2012, it's one in two and one in four, respectively. Internationally, British workplaces include some of those most technologically advanced. The 2013 Survey of Adult Skills, conducted across 24 countries by the OECD, the international think-tank, showed nearly a third of British employees in the top quartile for ICT skills use at work.

UKCES' recent *Future of Work* research demonstrates that the newest developments of technology will drive change still further. A closer connection between communication and real-world objects and activities – the so-called Internet of Things – and the application of computer power to increasingly abundant 'Big Data' have the potential to change the way many more jobs are done, especially in intermediate and higher skilled roles.

**Our Futures study also points to a growing trend for people to have longer working lives.** Over the past decade, the ageing of the Baby Boom generation has created the basis for a continued growth in over-50 employment, even against the backdrop of the recession (Chart 8). The greater educational and health opportunities for postwar generations, has also supported longer working. As these trends continue we are increasingly likely to see '4G workplaces' where employees from four different generations are working together.

For many, the possibility and desirability of a career plan fixed in teenage years is increasingly a thing of the past. Instead, our emphasis has to be on ensuring career plans which are adaptable, support learning new skills and progression through varying career paths.

**Chart 8**  
Employment growth since 2004, 25-49 and 50+



Source: ONS Annual Population Survey, NOMIS.

## The skilled workforce has expanded... but only to keep up with demand.

In discussions about skills, it is easy to overlook the great progress the UK has already made, driving development in intermediate and especially higher skills in response to technological and global developments (Chart 9). The sustained expansion of participation in higher education has led the move: within a decade, there has been a nine percentage points increase in the share of the workforce qualified to NVQ Level 4 and above – typically university graduates.

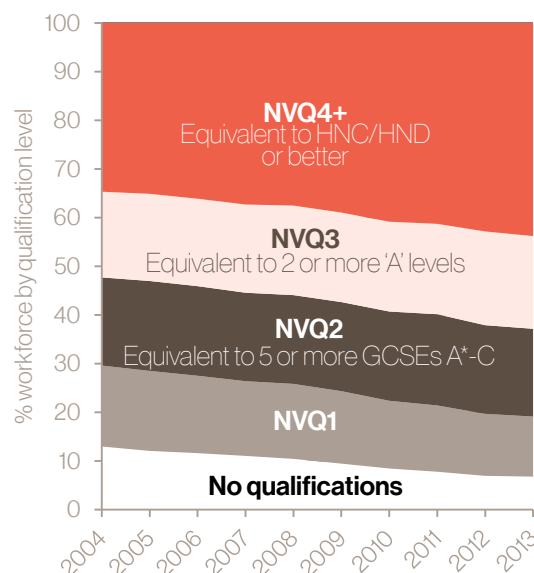
Like other advanced economies, the UK has expanded its supply of graduates primarily to meet a rising demand driven by trade and technological change. Recent research suggests that around twenty per cent of economic growth from 1982 to 2005 came from the increase in the graduate skills base; and a full third of the increase in productivity from 1994 to 2005. Contrary to speculation that such an expansion in education would lead to a decline in its value, the evidence is that pay premiums to higher levels of qualifications remain high (Chart 10). Furthermore, survey research with multinational employers suggests that the UK workforce is held in generally high regard.

Whilst that has been achieved with no loss to the numbers qualified to NVQ Levels 2 (equivalent to 5 or more good GCSEs) or 3 (2 or more A levels), and there has been a ten percentage point reduction to the numbers with lower qualifications or none at all, questions remain about the UK's intermediate skills base. This remains smaller than in many other advanced economies. But this is not simply a matter of deficient supply. Last year's OECD Survey of Adult Skills showed that the UK labour market has an average rate among advanced economies for jobs requiring tertiary or higher education, but an above-average rate for jobs requiring primary or less education. From the survey of multinational employers we know British workers do not do so well, in technical areas critical to progressing at work – business development, job-specific technical skills, and team-working. So why is this?

Developments in trade, and technological change, are giving rise to mixed consequences. Increasingly, job demands are 'polarising' into those which drive more value added activities demanding advanced skills and expertise, and those where traditional jobs are substituted by business models employing low-skilled, labour-intensive production methods. The increasing importance of services, and the power of technology to automate or de-skill routine tasks, combined with falling costs and barriers to trade all favour skills polarisation – and it appears well advanced in the UK, further challenging the future of our middle-skill labour market.

**Chart 9**

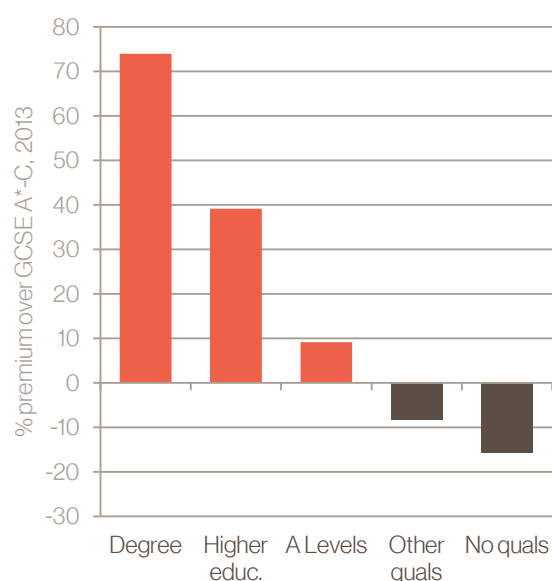
Workforce by qualification level, 2004-2013



Source: ONS Annual Population Survey, NOMIS.

**Chart 10**

% premium over GCSE A\*-C, median hourly pay, Jan-Dec 2013



Source: ONS Labour Force Survey (ad hoc 002770).

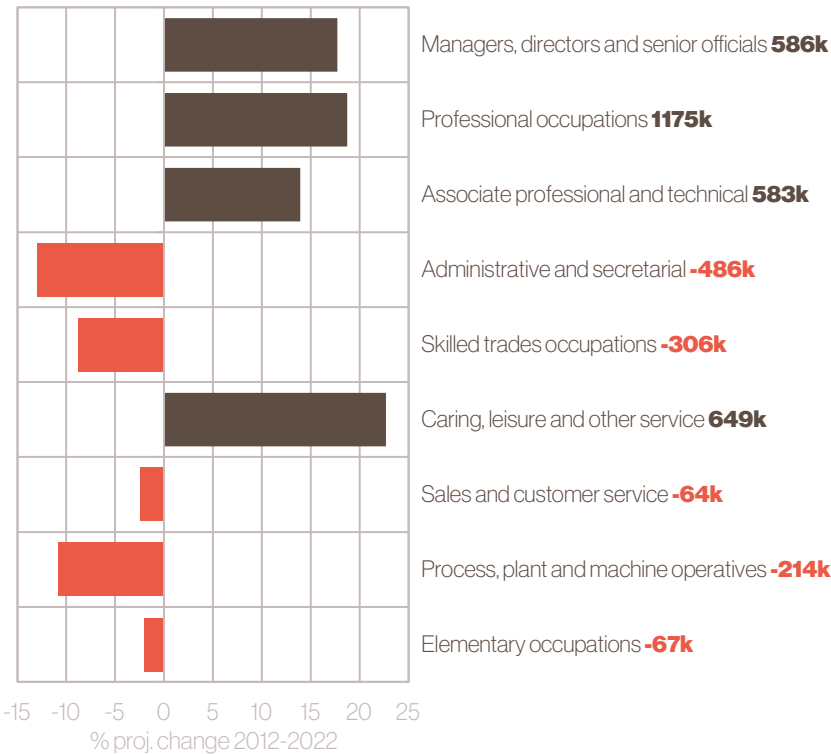
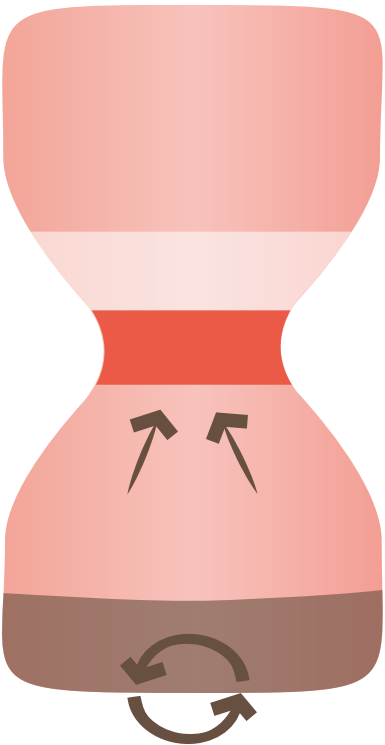
# The traditional middle of the labour market is in a long-term decline.

The result is an emerging 'hourglass' economy where the traditional job roles which made up the middle-skill labour markets and provided reliable career pathways with opportunities for decent pay and progression fall into decline. Even among low-skill jobs, only those requiring a high level of personal service 'touch' – especially, given ageing, in the care sector – escape the competition of trade and technology.

The news is far from all bad. The same turbulence of trade and technology will create opportunities for knowledge-intensive growth. Our *Working Futures* projections (Chart 11) suggest 2.3m additional managerial, professional and technical roles by 2022. Continuing the trends of the last two decades, this growth is expected in high-skill jobs

The question is, what happens to those in the middle? For example, do those displaced from stable middle-skill careers have the opportunity to move up, or do they 'bump down' and end up competing in a 'low pay, no pay' cycle for low-skilled work? And for the long term, just as longer, more varied working lives require more adaptable career plans, if we're seeing the traditional foundations of stable careers decline, what takes their place? Are we equipping people with the skills and support to make the most of this new labour market?

**Chart 11**  
The hourglass labour market:  
occupational projections, 2012-2022



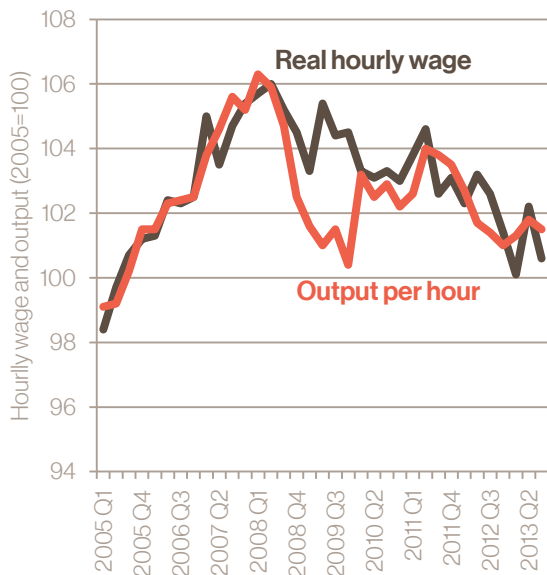
Source: UKCES *Working Futures* 2012-2022.

# Moving up

Our prosperity depends on rising productivity, and so we need to continuously improve people's skills and make the most of their talents. But persistent skills shortages for high skilled workers, combined with poor skill use of the skills we already have, are hampering competitiveness. More businesses need to act but limited established work-based routes to higher middle skills are inhibiting progression.

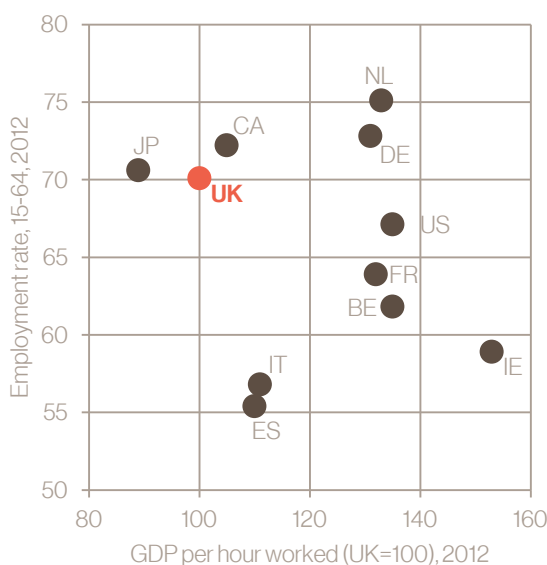
## Falling wages are in large part a symptom of our stumbling productivity.

**Chart 12**  
Real hourly wages and output,  
2005-2013



Source: ONS, *Examination of falling real wages, 2010-2013*.

**Chart 13**  
Productivity and employment, 2012,  
UK and selected advanced economies



Source: ONS (productivity) and OECD (employment).

Are we sufficiently developing and making use of our highly skilled workers to drive innovation and progress at work and support sustained growth and social prosperity? Our economic performance would suggest not. Whilst employment has been recovering for some time since the recession, there is a less certain resolution to the problem of declining real pay. Wage growth, lagging price inflation, has been a continuing experience since the initial onset of recession in 2008, and has regularly defied expectation since then. Worse still, it is not a universal fact across advanced economies – indeed, the UK seems to have been among the worst-afflicted.

Like many of our deepest economic concerns, stagnant and falling real wages are in many ways a reflection of underlying weaknesses in UK productivity. As Chart 12 highlights, the path of real hourly wages (defined in terms of output prices) closely matches the stumbling path of output per hour over the past decade.

The consequence is that much of the significant progress made in covering the productivity gap against leading advanced economies over the 1990s and 2000s has now been lost. Where before the recession, the UK was moving closer to that group of economies defined by their combination of high employment and high productivity, only our employment performance remains high (Chart 13).

There are many possible causes behind the UK's poor productivity performance, and reconciling them is beyond our scope here. While as a matter of simple arithmetic the high levels of employment and lows in output result in lower measured labour productivity, it seems more likely that the UK has seen a deterioration in competitiveness and that the labour market has found people work in less productive roles. Leaving aside recent problems, there are longstanding weaknesses – for example, in the long tail of employers with weak management practices – which frustrate productivity growth in the UK.

Whatever has happened, there is no reason to believe that the UK cannot return to productivity growth in the future. The gap with the leading advanced economies demonstrates that there remains substantial room to improve our long-term performance. Doing so depends on removing constraints to the improvement of skills, infrastructure and innovation as the motors of lasting economic growth.

Our chief concern here is with skills development and use, and it's the right skills for the right businesses that matter most. What we need is to make sure the opportunities are there for talented people to develop and apply the high level skills employers need to turn investments in technology and working practices into improved business performance.



## Skills gaps and skills shortages exist alongside underemployed talent.

We know from the UK Commission's own intelligence that businesses in all sectors suffer from the lack of skills where they are most needed. We use two measures of employers' current unmet skills needs:

- **Skills shortage vacancies** are vacancies which exist because employers cannot find people with the skills, qualifications or experience for a role.
- **Skills gaps** are when existing employees are not fully proficient, often because they are new in role, or because the role has changed.

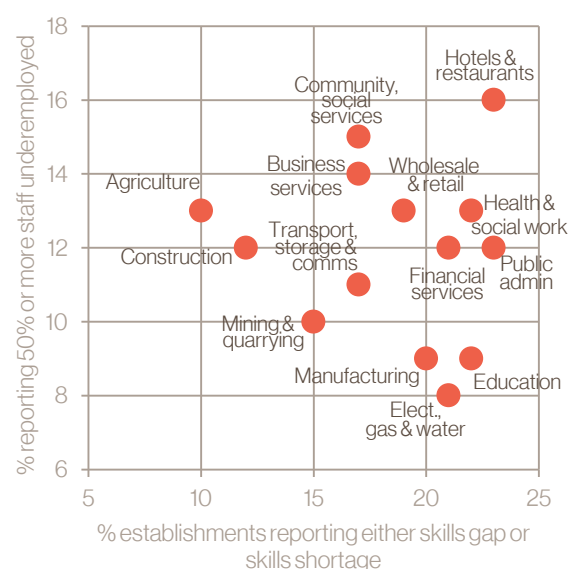
In the UK Commission's *Employer Skills Survey*, for some sectors as many as one in five workplaces report skills shortage vacancies and/or skills gaps. And of course where they persist they significantly hamper business performance. Even in agriculture, one in ten workplaces report such problems. Skills are in need across most sectors.

And yet at the same time, many of the same sectors report a high level of underemployed staff (Chart 14). This equates to over 4 million workers across the UK and on average a half of businesses. Again, there is no sector without workplaces reporting the problem. While we might naturally assume that skills gaps and skills shortages would encourage employers to make the best use of available skills, we find that skills deficiencies exist alongside poorly used skills. Indeed, one sector – hotels and restaurants – has the highest number of workplaces reporting skills gaps and shortages alongside the highest number perceiving underemployment.

Feast and famine in the market for skills could be driven by many factors. So what are the further features of this skills problem? Dealing first with underemployment, with nearly one in ten graduate-level workers employed in these roles, the UK demonstrates a higher level of underemployment than most of the advanced economies. In fact, the UK is only beaten by Spain and Ireland for the number of graduate-level workers in lower skill, manual roles (Chart 15).

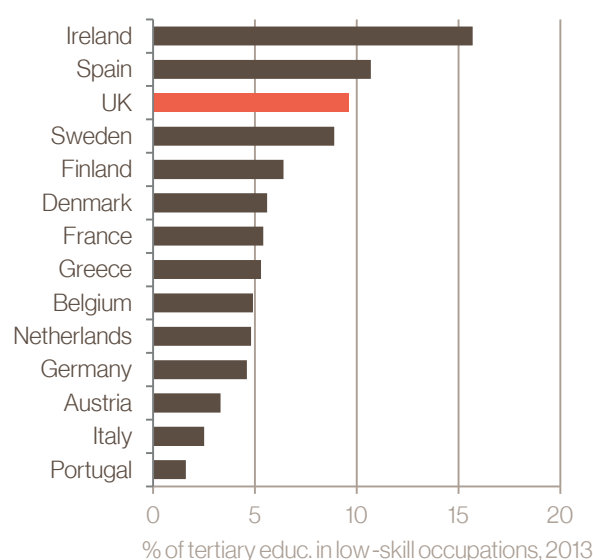
The persistence of skills deficiencies alongside the poor use of people's skills could in part be explained by staff being slow to move from declining to growing employers, as job composition shifts. Perhaps more significantly, it is the case that the skills of underemployed workers are not the skills most needed in the sector's workplace. Certainly, the UK sees a very high level of skilled workers employed in jobs requiring limited skill which is clearly a waste of talent. So part of the answer requires employers to ensure they are sufficiently demanding of their workforce and are designing jobs that adequately make use of skilled and able people. But, is it the case too, that our current skills systems is also not supplying the right skills?

**Chart 14**  
Prevalence of skills gaps and skills shortages alongside underemployment, by sector



Source: UKCES *Employer Skills Survey 2013*, tabs 87 & 90/1.

**Chart 15**  
Workers with higher education employed in low-skill (elementary, process and plant) roles, 2013



Source: Eurostat (edat\_ifs\_9905).  
Note: 'Higher education' is ISCED 5/6.



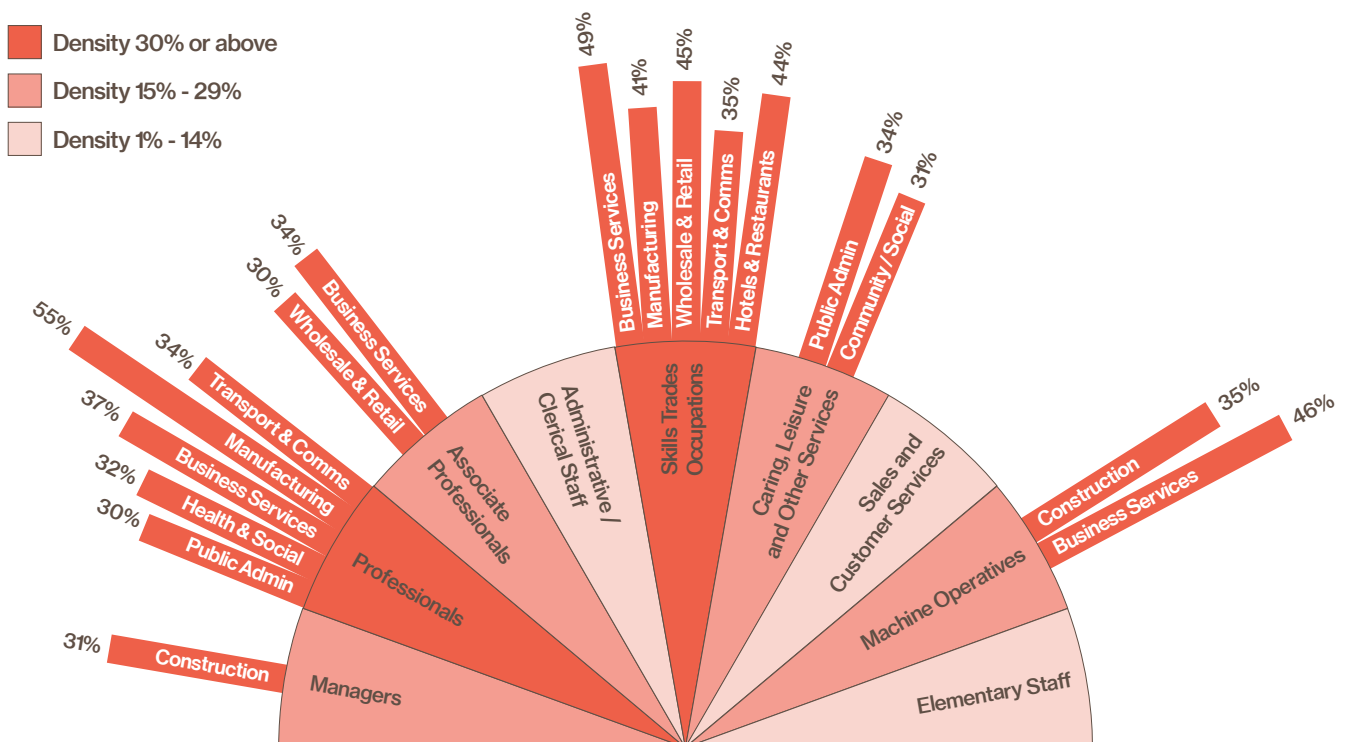
## Yet critical skills shortages persist, especially at middle and high skill levels.

As business confidence has recovered and employers have begun to recruit, the proportion of employers reporting skills shortage vacancies has increased. Whilst the volume of vacancies has risen by 12 per cent since 2011, skills shortage vacancies have increased by 60 per cent. Skills shortage vacancies now account for just under a quarter of all vacancies in 2013. Skills shortages and gaps are not universal, but their intensity and impact can hit hard on affected employers.

For instance, skills shortages are acute, and persistent, in middle-skill skilled trades – declining in number, but demanding to recruit – and at growing high skill levels for professionals and associate professionals. These roles are heavily concentrated in key sectors, including financial and business services, mining and quarrying, and transport and communications. There is also a need for health and social work professionals to meet the demands of a growing population.

Importantly, the most common types of skills shortages reported by employers are technical, practical or job specific skills. These skills are best gained in a workplace setting, and it's therefore no surprise that skills shortages cluster around particular occupations in particular sector. It's this concentrated nature which magnifies their economic effect, and calls for particular forms of upskilling in response.

**Chart 16**  
Skills shortage vacancies by occupation and major sectors affected



Base: All establishments with vacancies in each occupation in each sector. Figures only shown where base size greater than 50

Source: UKCES Employer Skills Survey 2013.

## Increasingly advanced jobs need high level skills, learned in the workplace.

The expansion in higher education has created a much greater supply of graduates, but it isn't always clear whether they reach some of the most critical skill needs in our economy. Questions of relevance and subject choice mean that not all graduates are ready with the skills to apply to real and pressing business problems.

It's for this reason that the OECD, in its recent Skills beyond School review of England, highlighted the potential of postsecondary vocational education and training in meeting the UK's skills challenges. Such education offers the potential to develop high-level skills in a workplace setting, improving their relevance and applicability. In more challenging economic times, especially with the sharp increase in tuition fees, work-based routes may offer a more assured route to a career for many young people.

But we are a long way from developing that potential. The post-secondary vocational sector has been characterised as the 'neglected middle child', lost between the further and higher education systems. While there are plenty of professional and technical qualifications, they remain tiny and variable in volume compared to the high and growing participation in undergraduate higher education (Chart 17).

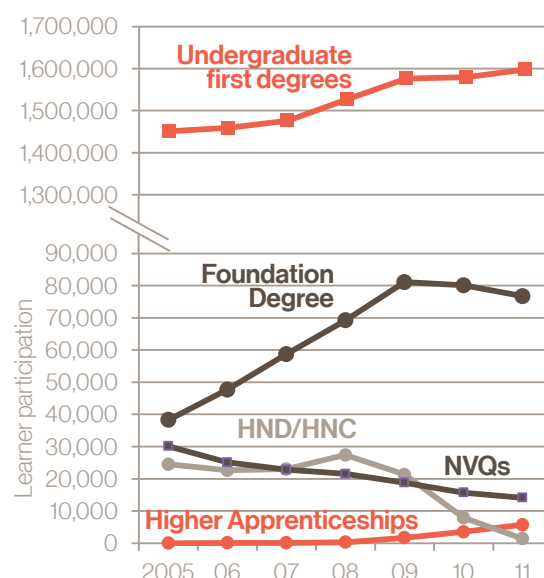
Taken together, participation in the four main vocational routes does not make up even ten per cent of the level of participation in undergraduate first degrees. While the development and rapid growth of Higher Apprenticeships has of course been welcome, they remain very few in number and do not offset the decline in take-up for other advanced vocational qualifications, such as HND/HNC courses or Foundation Degrees.

In a mixed international picture, the UK scores low for young people's participation in vocational tertiary education (Chart 18). Particularly notable are the US, France, and Germany, all achieving higher participation than the UK in moving young people through advanced professional and technical training, despite their very different institutional arrangements. Like the UK, the US has limited intermediate skills but a large graduate supply; but the US does much better in delivering advanced skills in these more practical modes.

If we are to develop these different routes to higher-level skills, we need our higher education institutions to play their part. But continual policy changes over many years and tough economic times have led to a sharp decline in the level of part-time undergraduate education. Even where employers and individuals want to step up to pursue the vocational route to high level skills, it is not always clear whether they will be able to find the most relevant education and training that can support it. So how are employers acting?

**Chart 17**

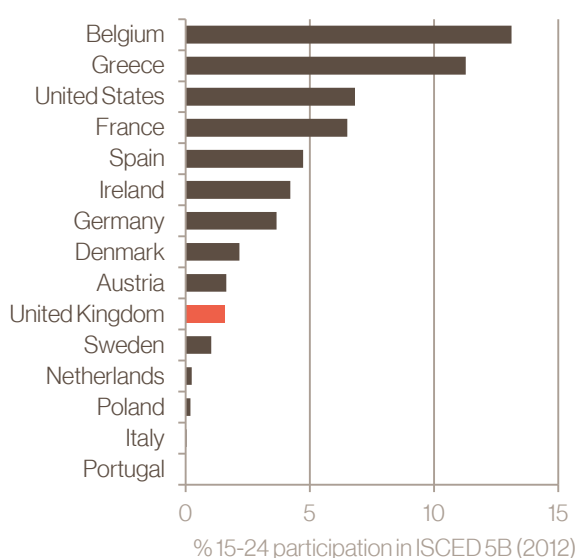
Participation in undergraduate higher education, England, 2005-2011



Source: Data Service, Skills Funding Agency.

**Chart 18**

15-24 participation in vocational tertiary education, selected advanced economies, 2012

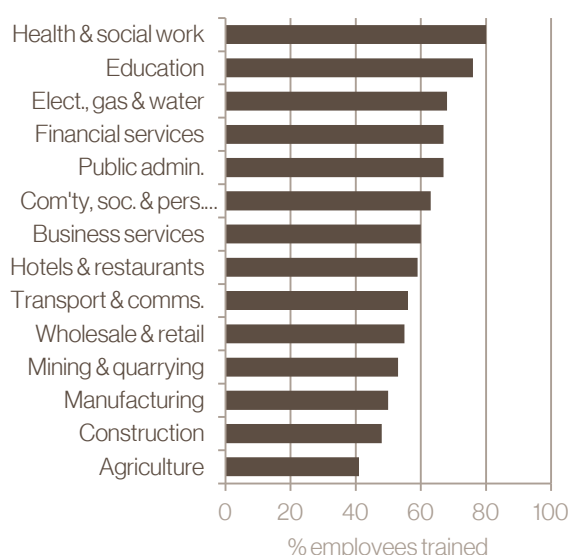


Source: Eurostat (educ\_enr11t) and population data.

Note: 'vocational tertiary' is ISCED 5B.

## Wide variations exist in the opportunity to improve skills at work.

**Chart 19**  
Average share of employees trained in past 12 months, by sector

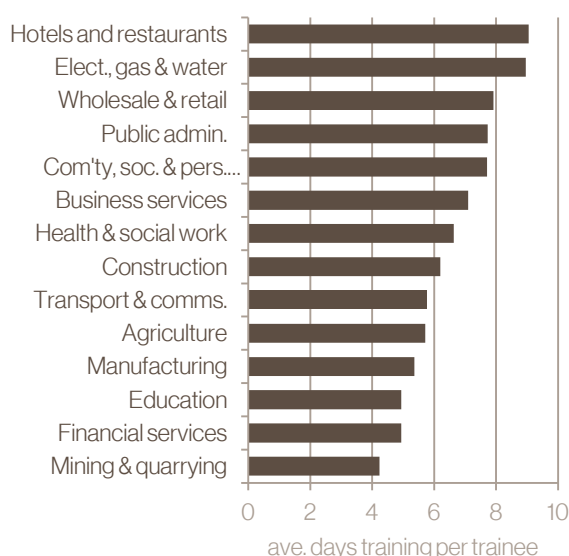


Source: UKCES Employer Skills Survey 2013.

The pressing need for more people with the right skills in the right places forces us also to turn to what employers themselves are doing to drive the creation of those skills. Employers invest substantial sums in training their staff – in 2013, the UK Commission's *Employer Skills Survey* estimated a total of £42.9bn, equivalent to around £2,550 per trainee, or just under £1,600 per employee. But, this conceals **significant variation in which employers train and how**. A little under two-thirds of employers trained their workforce in the past year, and around half provide off-the-job training, combining work with study. Of the significant minority who don't train at all, whilst most don't feel the need others find themselves frustrated by cost and time pressures. **Yet, is this sufficient to support on-going progression and to raise business competitiveness?**

**Where employers do provide training, not all staff access it, so opportunities to progress skills are uneven.** In 2013, employers reported that two fifths (62 per cent) of staff were trained, a substantial increase compared to 2011 (55 per cent). That gain is moderated by taking place alongside a fall in the days of training received by each affected staff member (from 7.8 to 6.7 days), and a fall in the overall level of training expenditure (from £45.3bn to £42.9bn). **Training also tends to be targeted to the most skilled workers.** In fact, only 52 per cent of administrative and clerical workers received training in the past 12 months, compared to 81 per cent care and leisure workers or 65 per cent in associate professional and technical roles.

**Chart 20**  
Average number of days' training per trainee in past 12 months, by sector



Source: UKCES Employer Skills Survey 2013.

**Unsurprisingly, there are significant variations by sector** from 41 per cent of employees in agriculture up to 80 per cent in health and social work (Chart 19). These sector variations can also be highly changeable: the proportion in construction fell from 2011 to 2013, while health and social work, electricity, gas and water, and transport and communications all significantly increased their level of training involvement.

In terms of the depth of training received, again there is a wide variety: from just over 4 days over the year in mining and quarrying; up to 9 days for hotels and restaurants and the electricity, gas and water sector (Chart 20). Across all sectors, 18 per cent of establishment provided 11 or more days of training for the average person trained; this figure falls sharply (to 8 per cent) for establishments employing 250 or more staff.

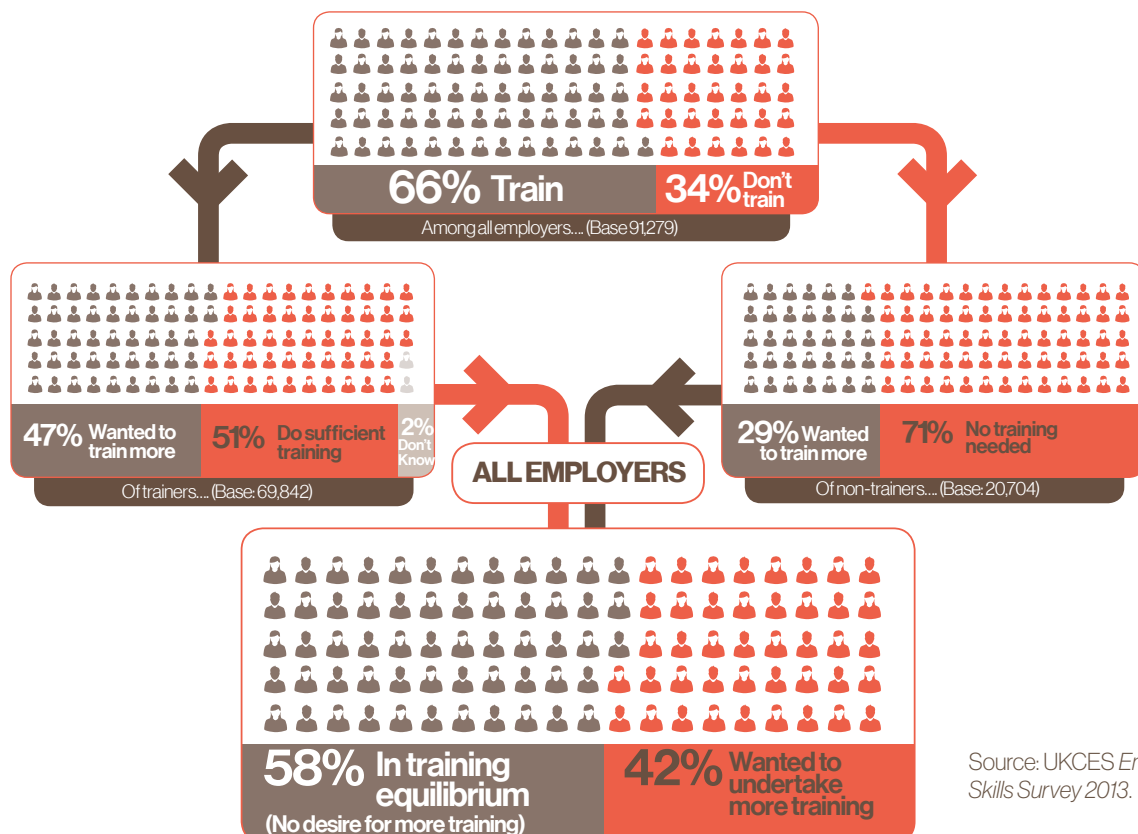
# Employers have demands for staff development that they aren't fulfilling.

Interestingly, our survey also shows that many employers acknowledge themselves that their current skills investment is insufficient. In fact, a large minority (42 per cent) of employers would like to train more but are prevented by barriers such as cost and time lost from the workplace. That includes nearly a third of those who did not train at all in the past year, and nearly half of those who had trained (Chart 21).

Nearly three quarters of employers report that they have further upskilling needs that they will need to act on in higher skilled roles in the coming years. There are often sound business reasons for these variations, but in enabling people to develop their careers and progress, they can lead to significant gaps in opportunity.

Substantial variations in employer practices raise concerns that our models for training delivery are not equipped to deliver the skilled people we will need for longer term success. As the CBI noted, "skills shortages and low levels of confidence ...show the market in higher-skills development is not yet delivering the outcomes needed". Encouragingly, our survey shows that we do have some employers stepping up to change here, with over one in ten adopting 'high performance' working practices and 38 per cent pursuing strategies based on the development of high value products.

**Chart 21**  
Employer training intentions compared to current levels



Source: UKCES Employer Skills Survey 2013.

## UKCES reading

*The UK Commission's Employer Skills Survey 2013: UK Results.* Evidence Report 81. UKCES, Wath-upon-Deane, January 2014.

*The future of work: jobs and skills in 2030.* Evidence Report 84. UKCES, Wath-upon-Deane, February 2014.

*Not just making tea... Reinventing work experience.* UKCES, Wath-upon-Deane, February 2014.

*Precarious futures? Youth employment in an international context.* UKCES, Wath-upon-Deane, June 2014.

*Working Futures 2012-2022: Main Report.* Evidence Report 83. UKCES, Wath-upon-Deane, March 2014.

## Further reading

T. Besley and J. Van Reenen. *Investing for Prosperity: a manifesto for growth.* Centre for Economic Performance, London School of Economics and Political Science, 2013.

E. Brynjolfsson and A. McAfee. *The Second Machine Age: Work, Progress and Prosperity in a Time of Brilliant Technologies.* W. W. Norton & Company, London, 2014.

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D. Holland, I. Liadze, C. Rienzo, and D. Wilkinson. *The relationship between graduates and economic growth across countries.* Research Paper No.110, Department for Business Innovation & Skills, London, August 2013.

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A. Tindle, A. Large, and J. Shury. *Multinational employers' perceptions of the UK workforce.* Research Paper No.170, Department for Business Innovation & Skills, March 2014.